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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/369,134

08/05/99

TARLTON

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EXAMINER

PATEL, V

ART UNIT

PAPER NUMBER

3626

DATE MAILED:

11/09/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/369,134

Applicant(s)

TARLTON, ORAN D.

Examiner

Vishal Patel

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3626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) ____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☒ Notice of References Cited (PTO-892)
- 15) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 2
- 17) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: .

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DETAILED ACTION

Election/Restrictions

- I. Claims 1-14, drawn to a seal, classified in class 277, subclass 609.
- II. Claims 15-20, drawn to manufacturing process, classified in class 219, subclass 76.15.

The inventions are distinct, each from the other because of the following reasons:

1. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the invention in group II for manufacturing a seal, this manufacturing process could be used to join to end joints of pipe (ie. First the two end joints of the pipes are joined together by a weld and then the weld is smoothen-out by machining the outside of the weld).
2. During a telephone conversation with Richard C. Auchterlonie on 10/24/00 a provisional election was made with traverse to prosecute the invention of group I, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10, line 4-5, "the first second", should be changed to --the first--.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, 6, 8, 10 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Fyffe, US Patent No. 1,426,724.

Fyffe discloses a composite metal seal comprising a core of relatively hard metal (c) and at least one annular region of relatively soft metal (c) that is integrally bonded with the core of relatively hard metal and that provides an annular sealing surface for effecting a fluid pressure seal. The core of relatively hard metal is inlaid and overlaid with the relatively soft metal of the annular region of relatively soft metal (see figure 3). The composite metal seal has a longitudinal axis, and the sealing surface is tapered with respect to the longitudinal axis.

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Regarding claim 8, 10 and 13: a composite metal seal ring (c and d) for effecting a fluid pressure seal with respective annular surfaces of first and second hub members (inside surface where a and b contact c). The composite metal seals ring comprising an annular core of relatively hard metal (c) and a first annular region (one of c) of relatively soft metal integrally bonded to the annular core of relatively hard metal. A second annular region of relatively soft metal (second of c) bonded to the annular core of relatively hard metal. The first annular region of relatively soft metal having a first annular surface for mating (see figure 3) with the annular surface of the first hub member to effect fluid pressure seal with the first hub member. The second annular region of relatively soft metal having a second annular surface for mating with the annular surface of the second hub member. The two annular regions of relatively soft metal are displaced from each other along a longitudinal axis of the composite metal seal ring. The annular core of relatively hard metal is inlaid and overlaid with the relatively soft metal of the first annular region of relatively soft metal. The annular core of relatively hard metal is inlaid and overlaid with the relatively soft metal of the second annular region of relatively soft metal. The first annular region of relatively soft metal is tapered with respect to the longitudinal axis to have a varying radius that is smallest away from the second annular region of relatively soft metal and that is largest toward the second annular region of relatively soft metal. The second annular region of relatively soft metal is tapered with respect to the longitudinal axis to have a varying

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radius that is smallest away from the first annular region of relatively soft metal and that is largest toward the first annular region of relatively soft metal (see figure 3).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fyffe.

Fyffe discloses the claimed invention except for the thickness of the first and second annular region of relatively soft metal to be 1/8 of an inch. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the first and second annular region of relatively soft metal of Fyffe to have a thickness of 1/8 inch, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

9. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fyffe in view of Bloom, US Patent No. 5,680,495.

Fyffe discloses the invention substantially as claimed above, but does not disclose the first and the second annual regions of soft metal to be welded onto the annular core of relatively hard metal. Bloom discloses that a deformable metal seal, where a soft metal

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is welded onto a annular core of relatively hard metal. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have the relatively hard metal and the relatively soft metal of Fyffe to be welded to each other, to provide a gas tight seal and a better deformable seal (see column 6, lines 34-39 and column 7, lines 14-21 of Bloom).

10. Claims 7, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fyffe in view of Poe, US Patent No. 4,563,025.

Fyffe disclose the invention substantially as claimed above, but does not disclose the first annular region of relatively region soft metal has at least one annular groove in the neighborhood of the annular surface of the first annular region of relatively soft metal and the second annular region of relatively region soft metal has at least one annular groove in the neighborhood of the annular surface of the second annular region of relatively soft metal. The grooves are rectangular in cross-section and having walls that are perpendicular to the tapered annular surfaces of the first and second annular regions. Poe disclose grooves on top of a deformable seal ring and the grooves are rectangular in corss-section. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first and second annular region of relatively soft metal to have grooves as taught by Poe, to maintain the integrity of all radial compression to the ring and also to enable the ring to remain within the elastic limit of the seal ring material (see abstract of Poe).

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Conclusion

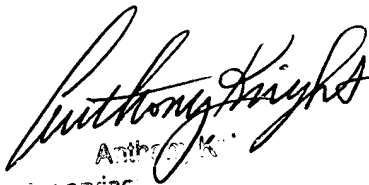
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kohlman, Sutter, Jr. et al, Wehner, Nicholson, Belter, Servant, Shivak, Tellier and Carter et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 703-308-8495. The examiner can normally be reached on 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-3687 for regular communications and 703-308-3687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

VP
November 1, 2000


Anthony Knight
Supervisor
G-3600